REMARKS

I. Rejection under 35 U.S.C. § 112 and

Claims 7-19, 21-27, 29-33, 38 and 40 are rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. The subject language is removed from the claims by the above amendment and, therefore, this rejection should be withdrawn.

II. Rejection under 35 U.S.C. § 103(a)

Claims 7-19, 21-27, and 29-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 90/15070 (Pirrung). Applicants respectfully traverse this rejection.

Pirrung does not teach or suggest applicants' claimed invention for several reasons. First, applicants' claims recite a microarray having a density of 400 or more discrete regions of DNA sequences per cm^2 of substrate surface. Pirrung only speculates that nucleic acids, among other polymers, can be immobilized on a substrate in predefined regions. There is no disclosure at all in the reference regarding a microarray having a density of 400 or more discrete regions of DNA sequences per cm^2 of substrate surface.

Applicants' claims further specify that the DNA sequences have at least 50 bases. Such a feature has an advantage in that the microarray sequences can selectively hybridize with specific polynucleotides in a polynucleotide mixture. In contrast, microarry DNA sequences that have relatively short oligonucleotides (such as 8-10 bases) cannot selectively hybridize with a specific polynucleotide sequence in a mixture.

Moreover, Pirrung only teaches synthesizing polymers (peptides) from monomers on the substrate. Accordingly, Pirrung does not teach or suggest individually applying DNA to each

region in the microarray. At best, Pirrung only describes the binding of a polypeptide sequence to a surface-bound peptide, and not the binding of a DNA sequence to a surface-bound DNA sequence.

Therefore, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

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The Examiner is invited to contact the undersigned attorney with any questions or comments relating to this patent application.

Should any other fee be required for any reason in connection with this communication, the Commissioner is authorized to deduct said fees from Howrey LLP Deposit Account No. 01-2508/12665.0009.CNUS01/WAA.

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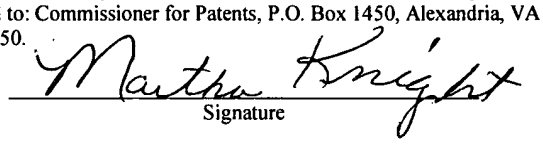
Respectfully submitted,



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37 C.F.R. 1.8
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